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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,736	12/05/2003	Vittorio Castelli	YOR920030355US1 (8728-642	1339

46069 7590 03/26/2007	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797	DAO, THUY CHAN	
	ART UNIT	PAPER NUMBER
	2192	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/729,736	CASTELLI ET AL.
	Examiner	Art Unit
	Thuy Dao	2192

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _03_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _19 January 2007_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-18 and 20_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-18 and 20_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _05 December 2003_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070319

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. Claims 1-18 and 20 are pending and have been examined.

Response to Arguments

3. The Applicants are thanked for a thorough reply. Applicants' arguments have been considered but are moot in view of the new grounds of rejection.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. (i.e., *"The present invention ..."*, lines 1 and 4).

Appropriate correction is required.

Claim Rejections – 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-12, 15-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Publication No. 2004/0130572 A1 to Bala (art made of record, hereinafter "Bala").

Claim 1:

Bala discloses a machine-readable medium and *a method for generating one or more computer-executable procedures* (e.g., FIG. 4, page 5, [0056-0058]), *comprising the steps of:*

recording at least one trace of at least one instance of a procedure (e.g., page 2, [0031]; FIG. 6, blocks 630-650-680, page 6, [0074-0079]);

simultaneously performing an alignment and generalization of the at least one trace (e.g., page 1, [0013]; page 2, [0023-0024]); *and*

generating the one or more computer-executable procedures consistent with the alignment and generalization (e.g., page 2, [0029]; page 5, [0058]).

Claim 2:

The rejection of claim 1 is incorporated. Bala also discloses *simultaneously performing an alignment and generalization of the at least one trace further comprises the steps of: computing all possible alignments and generalizations of the at least one trace; and selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes an alignment-generalization functional* (e.g., FIG. 3, GUI Automation 340, Dialog 320, Module 1-N, page 4 [0053-0055]).

Claim 3:

The rejection of claim 2 is incorporated. Bala also discloses *selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes the alignment-generalization functional comprises selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes an alignment functional and a generalization functional* (e.g., FIG. 2, Task Database 220, Task Prediction Module 21, page 4, [0050-0052]).

Claim 4:

The rejection of claim 3 is incorporated. Bala also discloses *selecting the alignment and the generalization from the all possible alignments and generalizations*

that maximizes the alignment functional and the generalization functional comprises selecting the alignment and the 2 generalization from the all possible alignments and generalizations that maximizes the alignment functional equal to a sum of steps correctly predicted by a procedure model (e.g., FIG. 5A-J, integration of multiple subtasks to form a corresponding task, page 5, [0059-0073]).

Claim 5:

The rejection of claim 3 is incorporated. Bala also discloses *selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes the alignment functional and the generalization functional comprises selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes the generalization functional that is equal to a sum of steps correctly generalized by a procedure model* (e.g., FIG. 3, page 4, [0053-0055]).

Claim 6:

The rejection of claim 2 is incorporated. Bala also discloses *selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes the alignment-generalization functional comprises selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes a monotonically increasing function of an alignment functional and a generalization functional* (e.g., FIG. 2, page 4, [0050-0052]).

Claim 7:

The rejection of claim 6 is incorporated. Bala also discloses *selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes a monotonically increasing function of the alignment functional and the generalization functional comprises selecting the alignment and the generalization from the all possible alignments and generalizations that maximizes a linearly increasing function of the alignment functional and the generalization functional* (e.g., FIG. 5A-J, page 5, [0059-0073]).

Claim 8:

The rejection of claim 1 is incorporated. Bala also discloses *simultaneously performing an alignment and generalization of the at least one trace further comprises selecting an alignment and generalization by maximizing an alignment-generalization functional using an optimization technique* (e.g., page 1, [0013]; page 2, [0023-0024]).

Claim 9:

The rejection of claim 8 is incorporated. Bala also discloses *selecting an alignment and generalization by maximizing an alignment-generalization functional using an optimization technique comprises selecting an alignment by maximizing the alignment-generalization functional using an iterative optimization technique* (e.g., page 2, [0031]; page 6, [0074-0079]).

Claim 10:

The rejection of claim 9 is incorporated. Bala also discloses *selecting an alignment by maximizing the alignment-generalization functional using an iterative optimization technique comprises selecting an alignment by maximizing the alignment-generalization functional using a gradient-descent technique* (e.g., page 4, [0053-0055]; page 5, [0056-0058]).

Claim 11:

The rejection of claim 1 is incorporated. Bala also discloses *simultaneously performing an alignment and generalization of the at least one trace further comprises the steps of: computing an initial alignment and generalization of the at least one trace; generating a procedure model of the initial alignment; and computing a best alignment and generalization of the procedure model* (e.g., page 6, [0074-0079]; page 2, [0029]).

Claim 12:

The rejection of claim 11 is incorporated. Bala also discloses *repeating the steps of determining the initial alignment, generating the procedure model, and determining the best alignment until a local optimum is detected* (e.g., page 5, [0058]; page 4, [0053-0055]).

Claim 15:

The rejection of claim 1 is incorporated. Bala also discloses *simultaneously performing an alignment and generalization of the at least one trace further comprises the steps of: determining an initial alignment and generalization of the at least one trace; generating a transition model and an action model of the initial alignment and generalization; and determining a best alignment of the transition model and the action model* (e.g., page 1, [0013]; page 2, [0023-0024]).

Claim 16:

The rejection of claim 15 is incorporated. Bala also discloses *repeating the steps of determining the initial alignment, generating the transition model and the action model, and determining the best alignment until a convergence is detected* (e.g., page 2, [0031]; page 6, [0074-0079]).

Claim 17:

The rejection of claim 15 is incorporated. Bala also discloses *generating a transition model and an action model of the initial alignment and generalization comprises generating a transition model for at least one node and an action model for the at least one node* (e.g., page 4, [0053-0055]; page 5, [0056-0058]).

Claim 18:

Claim 18 recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference

teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 18.

Claim 20:

Bala also discloses *a method for generating one or more computer-executable procedures, comprising the steps of:*

recording a state of a computer system (e.g., page 2, [0027], [0031]);

recording at least one trace of user actions that change the state of the computer system (e.g., page 2, [0029]; FIG. 6, blocks 630-650-680, page 6, [0074-0079]);

performing an alignment of a plurality of user actions of the at least one trace to at least a second trace to determine a plurality of aligned user actions; performing a generalization of the plurality of aligned user actions to determine a plurality of generalized and aligned user actions (e.g., page 1, [0013]; page 2, [0023-0024]; page 1, [0001]);

selecting a generalized and aligned user action using an alignment-generalization functional to represent a respective user action of the at least one trace (e.g., FIG. 2, Task Database 220, page 4, [0050-0052]; FIG. 6, atomic steps of a specific task, page 6, [0074-0079]); and*

generating the one or more computer-executable procedures executable by the computer system consistent with a selected generalized and aligned user action (e.g., page 2, [0029]; page 5, [0058]; page 2, [0023-0024]).

7. Claims 1, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,021,403 to Horvitz et al. (art made of record, hereinafter "Horvitz '403").

Claim 1:

Horvitz '403 discloses *a method for generating one or more computer-executable procedures, comprising the steps of:*

recording at least one trace of at least one instance of a procedure (e.g., FIG. 2, blocks 50-52, col.7: 17-67);

simultaneously performing an alignment and generalization of the at least one trace (e.g., FIG. 2, blocks 54-62, col.8: 29 – col.9: 13, col.10: 16-49; FIG. 7, col.12: 51 – col.13: 22); *and*

generating the one or more computer-executable procedures consistent with the alignment and generalization (e.g., FIG. 2, blocks 62-66, col.10: 50-58; FIG. 8, col.14: 44 – col.15: 31).

Claim 18:

Claim 18 recites the same limitations as those of claim 1, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim, it also teaches all of the limitations of claim 18.

Claim 20:

Horvitz '403 discloses *a method for generating one or more computer-executable procedures, comprising the steps of:*

recording a state of a computer system (e.g., col.3: 24-56; FIG. 32, col.29: 31-57);

recording at least one trace of user actions that change the state of the computer system (e.g., FIG. 2, blocks 50-52, col.7: 17-67);

performing an alignment of a plurality of user actions of the at least one trace to at least a second trace to determine a plurality of aligned user actions; performing a generalization of the plurality of aligned user actions to determine a plurality of generalized and aligned user actions (e.g., FIG. 2, blocks 54-62, col.8: 29 – col.9: 13, col.10; 16-49; FIG. 7, col.12; 51 – col.13: 22);

selecting a generalized and aligned user action using an alignment-generalization functional to represent a respective user action of the at least one trace; and generating the one or more computer-executable procedures executable

by the computer system consistent with a selected generalized and aligned user action (e.g., FIG. 2, blocks 62-66, col.10: 50-58; FIG. 8, col.14: 44 – col.15: 31).

Claim Rejections – 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bala in view of US Patent No. 6,,9,452 to Horvitz (art made of record, hereinafter "Horvitz '452").

Claim 13:

The rejection of claim 11 is incorporated. Bala does not explicitly disclose *generating a procedure model of the initial alignment comprises generating a Hidden Markov Model of the initial alignment.*

However, in an analogous art, Horvitz '452 further discloses *generating a procedure model of the initial alignment comprises generating a Hidden Markov Model of the initial alignment* (e.g., col.21: 47 – col.22: 27).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Horvitz '452 into that of Bala. One would have been motivated to do so to efficiently determine probability of state transitions and successive atomic steps in a specific task as suggested by Horvitz '452 (e.g., col.22: 7-58).

Claim 14:

The rejection of claim 13 is incorporated. Bala does not explicitly disclose *generating a Hidden Markov Model of the initial alignment comprises generating an Input/Output Hidden Markov Model of the initial alignment.*

However, in an analogous art, Horvitz '452 further discloses *generating a Hidden Markov Model of the initial alignment comprises generating an Input/Output Hidden Markov Model of the initial alignment* (e.g., col.21: 47 – col.22: 27).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teaching of Horvitz '452 into that of Bala. One would have been motivated to do so to as set forth above.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure:

US Patent No. 7,000,187 discloses a method and apparatus for software technical support and training, which uses the GUI and guides the user through the individual steps of a task selected from a list of predefined task (e.g., col. 2: 4-48).

11. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone is (571) 272 8570. The examiner can normally be reached on Monday, Tuesday, Thursday, and Friday from 6:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. Dao

TUAN DAM
SUPERVISORY PATENT EXAMINER